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| Notice of Allowability | Application No. | Applicant(s) | |
| | 09/859,482 | VERRALL ET AL. | |
| | Examiner | Art Unit | |
| | Sow-Fun Hon | 1772 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the terminal disclaimer and supplemental amendment, both dated 11/24/04.
2. ☒ The allowed claim(s) is/are 14,19-37 renumbered 1,2-20.
3. ☒ The drawings filed on 18 May 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/254,185.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date <u>11/29/04</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Supplemental Amendment

1. The supplemental amendment dated 11/24/04 has been entered.

Terminal Disclaimer

2. The terminal disclaimer dated 11/24/04 has been entered.

Examiner's Amendment

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jim Ruland on November 29, 2004. The specification has been amended as follows:

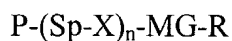
4. Page 1, under the title "Optical Retardation Film", insert heading - - Summary of Invention - -;
5. Page 1, above line 14 "Figures ...", insert heading - - Brief Description of Drawings - - ;
6. Page 36, above line 34 "In the foregoing ...", insert heading - - Examples - -.

Notice of Allowance

7. Claims 14, 19-37 are allowed.
8. The following is an examiner's statement of reasons for allowance: the closest prior art of record US 4,892,392 fails to teach or suggest, an anisotropic polymer layer exhibiting a tilted structure with an optical axis having a tilt angle θ relative to the plane of the layer greater than

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zero, obtained by polymerizing a polymerizable mesogenic material comprising at least one compound of the formula:



wherein

P is a polymerizable group,

Sp is a spacer group having 1 to 20 C atoms,

X is a group of -O-, -S-, -CO-, -COO-, -OCO-, -OCOO- or a single bond,

n is 0 or 1,

MG is a mesogenic or mesogenicity supporting group, and

R is an alkyl radical with up to 25 C atoms optionally unsubstituted, mono- or

polysubstituted by halogen or CN, optionally one or more non-adjacent CH₂ groups are replaced,

independently, by -O-, -S-, -NH-, -N(CH₃)-, -CO-, -COO-, -OCO-, -OCO-O-, -S-CO-, -CO-S- or

-C≡C- where where oxygen atoms are not linked directly to one another, or R is halogen, cyano

or, independently, P-(Sp-X)_n- as defined in formula 1;

wherein the polymerizable mesogenic material comprises at least 95% by weight of

polymerizable compounds, and the tilt angle θ in said layer varies continuously in a direction

normal to the layer, starting from a minimum value θ_{\min} of 0 – 20 degrees at one side of the

layer and ranging to a maximum value θ_{\max} of 20 – 90 degrees on the opposite side of the layer.

US 4,892,392 fails to teach that the tilt angle θ varies continuously in a direction normal to the layer, starting from a minimum value θ_{\min} of 0 – 20 degrees at one side of the layer and ranging to a maximum value θ_{\max} of 20 – 90 degrees on the opposite side of the layer. There is

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no motivation to combine US 4,892,392 with US 4,084,884 since '392 is directed to an alignment layer, and '884 is directed to the liquid crystal layer in the liquid crystal cell.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Hon.

Sow-Fun Hon

11/29/04

Harold Pyon
HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

11/29/04